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Defense Information Infrastructure (DII)

Common Operating Environment (COE)

**Remote Segment Installer Segment User's Guide
(HP-UX 9.07, Solaris 2.4, and Solaris 2.5.1)**

FINAL

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Preface

[HELVETICA FONT]	Used to indicate keys to be pressed. For example, press [RETURN].
Courier Font	Used to indicate entries to be typed at the keyboard, UNIX commands, titles of windows and dialog boxes, file and directory names, and screen text. For example, execute the following command: <pre>tar xvf /dev/rmt/3mn</pre>
"Quotation Marks"	Used to indicate prompts and messages that appear on the screen.
<i>Italics</i>	Used for emphasis.

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1. Introduction

The COERmtInstall tool is the Defense Information Infrastructure (DII) Common Operating Environment (COE) remote installation tool. This tool is normally selected from the System Administration menu bar as the Remote Segment Installer option, but it may also be invoked from the command line. The COERmtInstall tool can be used in either a “push” or a “pull” mode.

The remote installation *push* operation involves the transfer of one or more segments from the source site [e.g., Operational Support Facility (OSF)] across the network to the target site. The selected segment(s) either can be loaded on the network installation server or installed directly on the target machine. In the push mode, the operator is at the source site.

The remote installation *pull* operation involves an operator at the target site requesting the transfer of one or more segment install file(s) from the source site across the network to the target site. Pull mode operation has a Worldwide Web (WWW) interface intended for ease of use. The selected segment(s) either can be loaded on the network installation server or installed directly on the source machine.

1.1 Enabling the Remote Segment Installer Segment

The DII COE kernel must be loaded at the target site before the Remote Segment Installer segment can be used. The following basic setup issues must be resolved:

- C **The account used when running the Remote Segment Installer must have permission to create and write to the network installation server directories (e.g., /h/NET_SERVER, /home2/NET_SERVER) and /h/data/global/sysAdm** In addition, root must be able to read/write to these directories for segment to be installed remotely.
- C **The network installation server directory must be shared.** The following line must be in the /etc/dfs/dfstab file for Solaris:

```
share -F nfs [name of drive]
```

The directory name must be listed in the /etc/exports file for HP. If the directory is not shared, use the Disk Manager option to share the installation server directory. Refer to the *DII COE System Administrator's Guide (HP and Solaris)* for more information about using the Disk Manager option.

- C **The working partition must be large enough to hold the necessary segment installation files.** Total disk space required is two to three times the size of the segment installation file.

1.2 Installing the Remote Segment Installer Segment

The system administrator must ensure that the system is correctly loaded with the DII COE Version 3.0.0.3 before loading the Remote Installer Version 2.0.0.0 segment. The Remote Segment Installer segment can then be installed using the `Segment Installer` option from the `Software` pull-down menu. Reference the *DII COE System Administrator's Guide (HP and Solaris)* for more information on installing the Remote Segment Installer segment.

NOTE: A Netscape segment needs to be loaded before the COERmtInstall tool can be installed. The Netscape segment is required by the Remote Segment Installer segment for graphical pull operations.

1.3 Security Measures

The COERmtInstall tool provides several security measures (e.g., encryption, passwords, anonymous FTP) to protect segment transmission and to prevent unauthorized access to the repository or a target site.

NOTE: No encryption is available for anonymous FTP. Encryption must be enabled at the source site by using a Netscape server with Secure Socket Layer (SSL) support.

1.4 Additional Sources of Information

Reference the following documents for more information about the Remote Segment Installer segment:

- C *Defense Information Infrastructure (DII) Common Operating Environment (COE) Integration and Runtime Specification* Version 2.0, DII COE I&RTS:Rev 2.0, Inter-National Research Institute, October 23, 1995
- C *Defense Information Infrastructure (DII) Common Operating Environment (COE) Programming Guide (HP and Solaris) FINAL* Version 3.0.0.3, DII.3003.Final.UNIX.PG-1, Inter-National Research Institute, October 29, 1996
- C *Defense Information Infrastructure (DII) Common Operating Environment (COE) System Administrator's Guide (HP and Solaris) FINAL* Version 3.0.0.3, DII.3003.Final.UNIX.AG-1, Inter-National Research Institute, October 29, 1996.

2. COERmtInstall Operation

2.1 Push Mode

The remote installation push operation involves the transfer of one or more segments from the *source* site [e.g., Operational Support Facility (OSF)] across the network to the *target* site. The source site can also be called the *repository* site. Segment transfer from a source to a target site in push mode is accomplished using a command line interface. In the push mode, the operator is at the source site.

The syntax is

```
COERmtInstall <-s|-i> <hostname> <filename>
```

where `COERmtInstall` is the Remote Segment Installer tool name, `-s` and `-i` are supported parameters, `hostname` is the hostname or Internet Protocol (IP) address of the target machine, and `filename` is the full path of the segment installation file that is to be installed. The `-s` and `-i` parameters are mutually exclusive and may not be used to perform a pull mode segment transfer or to perform remote deinstallation. In addition, a hostname and a filename must be specified for push mode operation.

The `-s` parameter sends the designated file across the network to the target site and loads it on the network installation server only. The COEInstaller is launched on the target machine to allow the operator from the source site to load the segment on the network installation server.

The `-i` parameter sends the designated file across the network to the target site and then launches the COEInstaller tool on the target machine to allow the operator from the source site to perform an actual installation on the target machine.

For example, consider installing segments contained in a file named `Netscape.tar` underneath the `/home10/ftp/pub/RemoteInstall` directory to the network installation server on a remote machine named `jdefest.jdef`. A valid command is

```
COERmtInstall -s jdefest.jdef /home10/ftp/pub/RemoteInstall/netscape.tar
```

The operator would then receive a prompt to enter a user name and password.

NOTE: A password is required.

After the operator enters a valid user name and password, a series of messages appears, such as:

```

Checking remote system type...
Attempting to get free space from remote machine...
Free Disk Space on Remote Machine == 255428 KB

Installing Segment File [/home10/ftp/pub/RemoteInst/Netscape.tar]
This can take a while -- please be patient.

Sending file: Netscape.tar
100% 0 =====> 2447360 bytes. ETA: 0:00
2447360 bytes sent in 2.19 seconds, 1.06 MB/s.

Formatting segment on remote machine...
*** Remote Install Completed ***

```

At this point, the COEInstaller launches on the target machine. If the operator plans to load the segment on the network installation server (as indicated by the `-s` parameter), the COEInstaller launches on the target machine and echoes the Segment Installation Server window to the source machine (Figure 1). The operator can then load the segment on the network installation server. If the operator plans to install the segment on the target machine (as indicated by the `-i` parameter), the COEInstaller launches on the target machine and echoes the Installer window to the source machine (Figure 2). The operator can then install the segment on the target machine.

Refer to the *DII COE System Administrator's Guide (HP and Solaris)* for more information about loading and installing segments.

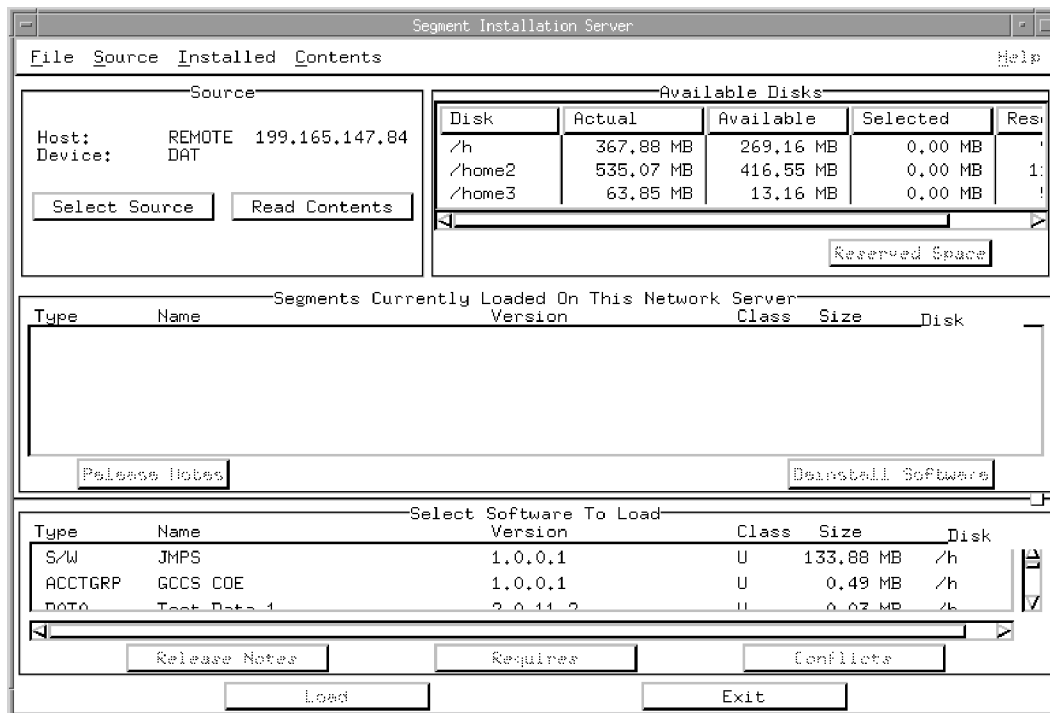


Figure 1. Segment Installation Server Window

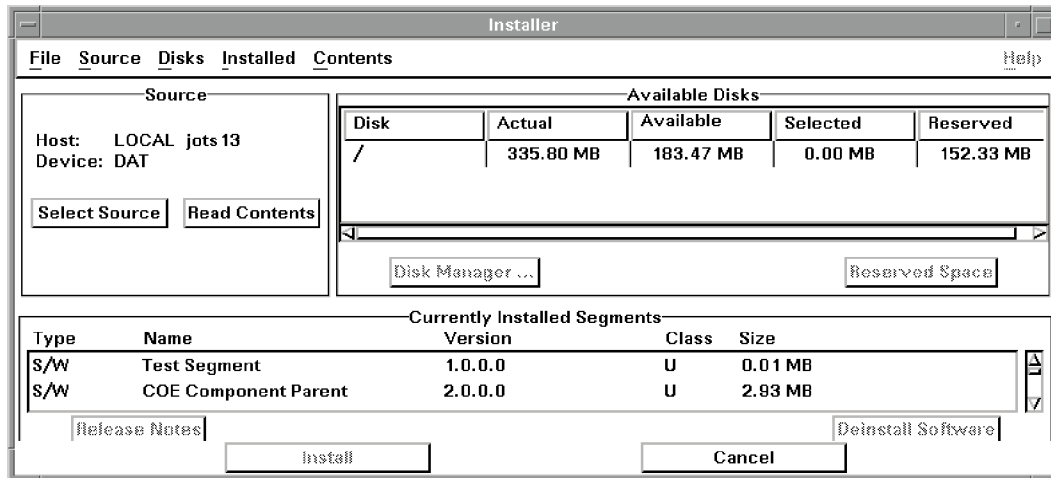


Figure 2. Installer Window

2.2 Pull Mode

The remote installation pull operation involves an operator at the target site requesting the transfer of one or more segment install file(s) from the source site to the target site.

Pull mode operation has a WWW interface intended for ease of use.

2.2.1 Graphical Pull

Segment transfer from a source to a target site in pull mode can be accomplished using a graphical user interface (GUI). First, a WWW server must be set up on the server machine and the Netscape segment must be installed on your local workstation in order to use the GUI.

Follow the steps below to run the Remote Segment Installer to download segments in pull mode:

- STEP 1: **Log on to the machine.** Log in with a sysadmin account and password at the prompts.
- STEP 2: **Execute the Remote Segment Installer.** The System Administration menu bar appears. Select the Remote Segment Installer option from the Software pull-down menu, or double-click on the Remote Installer icon.
- STEP 3: **View a list of hosts.** The REMOTE INSTALL window appears (Figure 3). The word <NONE> appears in the HOST data entry field. Click on the HOST button.

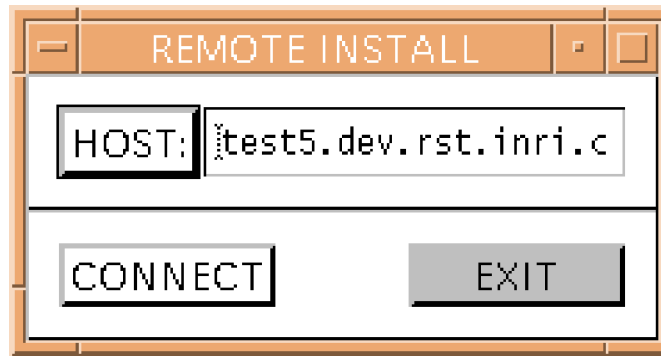


Figure 3. REMOTE INSTALL Window

NOTE: If this is the first time you have used the Remote Segment Installer option, you must enter a valid host name or IP address of the host machine in the HOST field. Each host you enter in this field will become a valid selection for future installations.

STEP 4: Select a host. The SELECT HOST window appears (Figure 4). This window displays a list of remote servers that act as hosts. Click on a host to highlight it and click on the OK button.



Figure 4. SELECT HOST Window

STEP 5: Connect to the host. The REMOTE INSTALL window reappears (Figure 2). The selected host appears in the HOST data entry field. Click on the CONNECT button. A dialog box appears stating that a connection is being made to the selected host.

STEP 6: Accept the terms of the Netscape license agreement. The Netscape: License Agreement screen appears. Click on the Accept button.

STEP 7: Determine the segments for which you want information. The Netscape : SDMS Home Page Screen appears, which displays the Software Distribution and Management System (Figure 5). This screen allows you to search for a specific segment file by segment name, version number, and/or hardware type. If you want to view all segment files, proceed to STEP 8. If you want to select particular segment files to view, type a segment name in the Segment Name field, type a version number in the Version field, or click on a hardware platform in the Hardware field to select it.

NOTE: Leave a field blank to return all values for that field.

STEP 8: Search for information about the selected segment(s). Click on the Search Now button to search for information about segments you selected, or click on View All Segment Files to search for information about all segments.

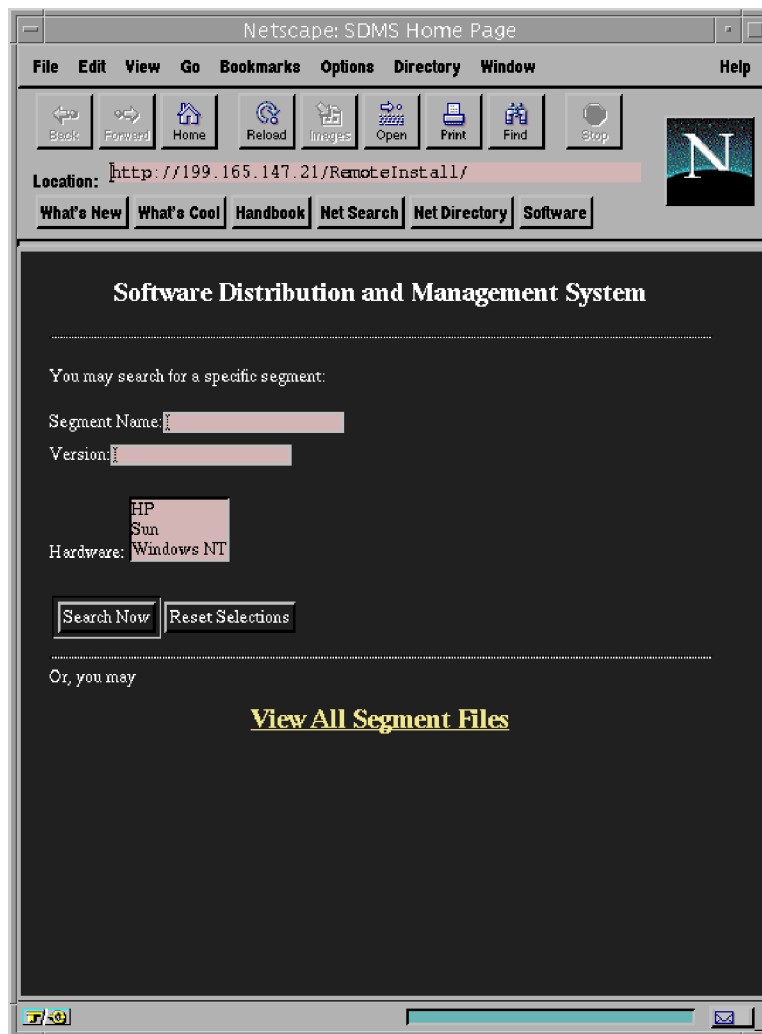


Figure 5. Netscape: SDMS Home Page Screen

STEP 9: View information about the selected segment(s). The Netscape: Segment Catalog screen appears (Figure 6). This screen lists segments that can be downloaded and the size of each segment (in KB). Below each segment listed are five boxes that contain the following information about the segment: the version, the segment type, hardware type, segment requires, and segment conflicts.

NOTE: You may read the segment's release notes by clicking on the segment name or read the segment's requires and conflicts by clicking on the words *Requires* or *Conflicts*.

STEP 10: Select the segments you want to download. Click on the checkbox(es) to the left of the segments you want to download.

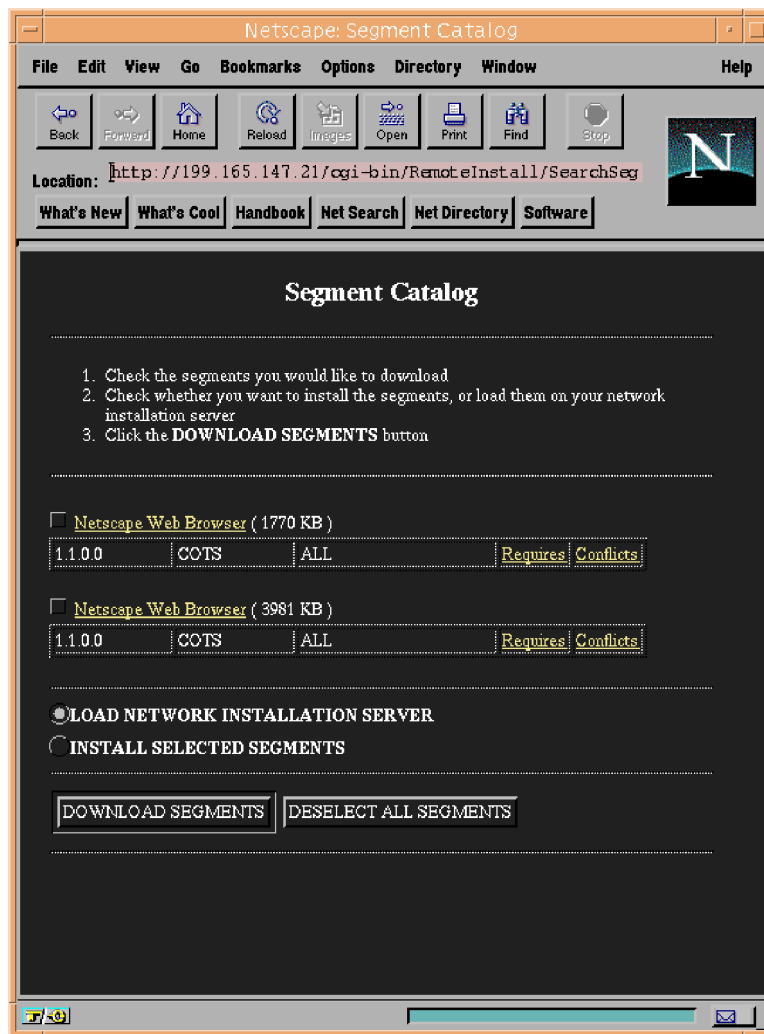


Figure 6. Netscape: Segment Catalog Screen

NOTE: Make sure that the hardware is correct. The hardware for each segment is shown in the third box below the segment.

NOTE: Click on the `DESELECT ALL SEGMENTS` button to deselect all selected segments.

STEP 11: Determine if the selected segment(s) will be installed on your machine or loaded on the network installation server. Click on either the `LOAD NETWORK INSTALLATION SERVER` option or the `INSTALL SELECTED SEGMENTS` option.

STEP 12: Download the selected segment(s). Click on the `DOWNLOAD SEGMENTS` button.

NOTE: Segments will take between a few minutes and a few hours to download.

The Segment Installation Server window appears if the `LOAD NETWORK INSTALLATION SERVER` option was selected (Figure 1). The Installer window appears if the `INSTALL SELECTED SEGMENTS` option was selected (Figure 2). Except for their titles, these windows are identical. The Segment Installation Server window is the same as the window that appears when the Segment Installation Server option is selected from the System Administration Software pull-down menu, except that the Device is `FILE`. The Installer window is the same as the window that appears when the Segment Installer option is selected from the System Administration Software pull-down menu, except that the Device is `FILE`.

STEP 13: Respond to the Netscape security warning. Read the message in the Netscape: Security Warning screen. Click on the Show this Alert Next Time toggle if you want the security message to appear every time you load or install a segment remotely. Then click on the Continue Submission button to continue performing the load or installation.

When the segment has been transferred to the target machine by the WWW server, the COEInstaller will load on the target machine. The segment(s) can then either be loaded on the network installation server or installed on the target machine, depending on which option is chosen.

It is recommended that segments be loaded on the network installation server and then installed on the machine by running Segment Installer from the System Administration pull-down menu or from the icon. Loading segments on the network installation server allows them to be installed on many machines without installing them over the wide area network (WAN) and accessing the repository machine. This allows for faster installations (LAN speed is faster than WAN speed).

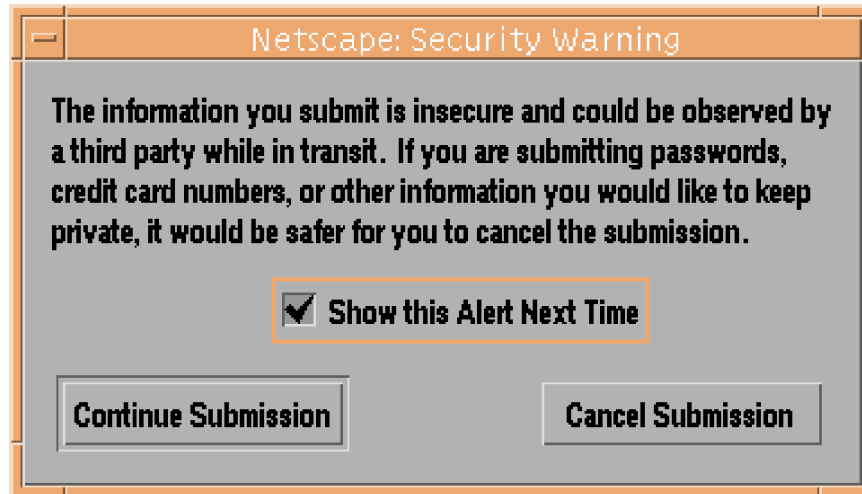


Figure 7. Netscape: Security Warning Screen

2.2.2 Command Line Pull

Segment transfer from a source to a target site in pull mode can also be accomplished using a command line interface. You must first set up an anonymous FTP server on the repository machine in order to use a command line interface.

The syntax for running the command line pull Remote Segment Installer tool is

```
COERmtInstall <-g|-gi> <hostname> <filename>
```

where `COERmtInstall` is the Remote Segment Installer tool name, `-g` and `-gi` are supported parameters, `hostname` is the hostname or IP address of the source machine, and `filename` is the full path of the segment installation file that is to be installed. The `-g` and `-gi` parameters are mutually exclusive and may not be used to perform a push mode segment transfer or to perform remote deinstallation. In addition, a hostname and a filename must be specified for pull mode operation.

The `-g` parameter sends the file across the network and launches the COEInstaller to load segments on the network installation server only.

The `-gi` parameter sends the file across the network and launches the COEInstaller to install segments on the local (target) machine.

Output from this operation is very similar to the output for the push operation. The segment file is transferred across the network to the target machine. The segment installer will launch on the local machine and the system administrator will be able to load the segments on the network installation server or install them on the local machine according to the command line parameters specified.

If no command line parameters are specified, and hostname and filename are both omitted, the tool operates in pull mode but with a GUI, as described in subsection 2.2.1, *Graphical Pull*. A window appears to prompt the user for the IP address or hostname of the repository site. A connection is then made to the repository site, if it is reachable, and a list of segment files is displayed for selection.

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3. Remote Deinstallation

The COERmtInstall tool also allows a source site to remove a segment remotely on a machine located at the target site. Remote deinstallation is essentially accomplished by launching the target machine's COEInstaller on the target machine from the source site. Once the COEInstaller is launched, it echoes output to the source display, which allows an operator at the source site to deinstall one or more segments. Remote segment deinstallation is accomplished using a command line interface.

The syntax is

```
COERmtInstall -l <hostname>
```

where COERmtInstall is the Remote Segment Installer tool name, -l is the supported parameter, and hostname is the hostname or IP address of the target host machine. Remote deinstallation does not use push or pull mode parameters. In addition, a hostname must be specified for remote deinstallation.

After typing the command above, the operator receives a prompt for a user account and password for the target machine. COERmtInstall will launch the COEInstaller on the target machine and echo the output to the source display (see Figure 2). At this point, the operator at the source location can install or deinstall one or more segments currently installed on the target machine. Refer to the *DII COE System Administrator's Guide (HP and Solaris)* for more information about installing and deinstalling segments.

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4. Remote Segment/Patch Installation

Follow the steps below to install a segment from a source site to a target site.

- STEP 1: **Run the MakeInstall tool on the segment.** Run MakeInstall on the segment using the "write to disk" option. This creates a segment installation tar file. Refer to the *DII COE Programming Guide (HP and Solaris)* for information about running the MakeInstall tool.
- STEP 2: **Use the COERmtInstall tool to send the segment installation file over the network.** Follow the steps in Section 2, *COERmtInstall Operation*.
- STEP 3: **Install the segment using the COEInstaller tool.** Follow the steps in Section 2, *COERmtInstall Operation*.

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